State Board of Education Approved
February 2002

INFORMATION TECHNOLOGY INFRASTRUCTURE

COURSE DESCRIPTION

This course is designed to prepare students with work-related skills for advancement in the telecommunication and information technology career paths. Content provides students the opportunity to acquire basic foundational knowledge and skills in both theory and practical applications in direct current, alternating current, and power supply circuits. Course content includes fundamentals of networking concepts for personal computers (PC), networking, determining system requirements, setting up equipment, and performing installation tests for the end user. Content provides the opportunity to evaluate and install peripheral devices and become familiar with operating systems. Course content provides students the opportunity to acquire basic fundamental skills in both theory and practical applications of language, structure, and typography. Standards 11 through 13 stress layout and design guidelines as applied in the design of markup language documents. Course content will be delivered through virtual training and hands-on methods. Competencies mastered during this course help prepare students toward acquiring A+ and/or Net+ certification and/or Web design employment.

Prerequisite: None

Recommended: Skills in keyboarding

Recommended Credits: 1 or 2

Recommended Grade Level: 9th and 10th

NOTE: Standards 1 through 10 apply for 1 credit. Standards 11 through 13 apply for 1 additional credit.

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INFORMATION TECHNOLOGY INFRASTRUCTURE STANDARDS

1.0 Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workshop.

2.0 Students will evaluate career opportunities and career paths within the information technology industry.

3.0 Students will analyze the growth and development of the information technology industry to gain insight regarding past, current, and future trends of computer architecture, network architecture, and Web design.

4.0 Students will interpret and demonstrate the principles of industrial safety standards associated with the information technology industry.

5.0 Students will analyze electronic fundamentals and evaluate basic components associated with a computer architecture, network architecture, and Web design.

6.0 Students will evaluate the general responsibilities of an operating system.

7.0 Students will evaluate peripheral devices that can be attached to the central processing unit.

8.0 Students will analyze Windows programs.

9.0 Students will install drivers for Windows specific applications.

10.0 Students will evaluate capabilities of printers.

11.0 Students will demonstrate advanced knowledge of the Internet.

12.0 Students will develop proficiency with the features and utilities available with commercial off-the-shelf (COTS) Web building software.

13.0 Students will organize and connect multiple Web documents using frame pages.

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 1.0

Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.

LEARNING EXPECTATIONS

The student will:
1.1 Cultivate positive leadership.
1.2 Participate in SkillsUSA-VICA as an integral part of classroom instruction.
1.3 Assess situations and apply problem-solving and decision-making skills within the school, community, and workplace.
1.4 Participate as a team member.

PERFORMANCE STANDARDS: EVIDENCE STANDARD IS MET

The student:
1.1 Demonstrates character and leadership using creative- and critical-thinking skills.
1.2.A Relates the creed, purposes, motto, and emblem of SkillsUSA-VICA to personal and professional development.
1.2.B Plans and conducts meetings and other business according to accepted rules of parliamentary procedure.
1.3.A Makes decisions and assumes responsibilities.
1.3.B Analyzes a situation and uses the Professional Development Program of SkillsUSA-VICA to resolve it.
1.4.A Organizes and participates in committees.
1.4.B Cooperates with peers to select and organize a community service project.

SAMPLE PERFORMANCE TASKS

- Create a leadership inventory and use it to conduct a personal assessment.
- Participate in various SkillsUSA-VICA programs and competitive events such as Community Service.
- Use a formal planning or decision-making process to select, to implement, and to evaluate an activity within the school, community, and workplace.
- Develop an annual program of work.
- Prepare a meeting agenda for a SkillsUSA-VICA monthly meeting.

INTEGRATION LINKAGES

Professional Development Program, SkillsUSA-VICA, Communication and Writing Skills, Teambuilding Skills, Research, Language Arts, Sociology, Psychology, Math, Math for Technology, Applied Communications, Social Studies, Problem Solving, Interpersonal Skills, Employability Skills, Critical-Thinking Skills, Secretary's Commission on Achieving Necessary Skills (SCANS)

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 2.0

Students will evaluate career opportunities and career paths within the information technology industry.

LEARNING EXPECTATIONS

The student will:
2.1 Develop a profile of career opportunities.
2.2 Develop a personal education/career roadmap.
2.3 Project future career opportunities within the information technology industry.

PERFORMANCE STANDANDS: EVIDENCE STANDARD IS MET

The student:
2.1 Researches the information technology industry for various career paths and job titles.
2.2.A Plans personal education paths, based on aptitude, available courses, postsecondary education, and current career paths.
2.2.B Profiles personal characteristics, which are beneficial to the success of a professional in the information technology industry.
2.3 Researches and develops a projection of information technology industry trends related to career opportunities.

SAMPLE PERFORMANCE TASKS

- Develop a list of career opportunities, including education requirements, responsibilities, and salary ranges.
- Develop a personal career plan.
- Research and present information on focus and trends in the information technology industry.
- Incorporate professional terminology into conversations.
- Participate in SkillsUSA-VICA programs and events.

INTEGRATION LINKAGES

Computer Skills, Internet Navigation Skills, Protocols, Language Arts, Foreign Language, Science, Math, Math for Technology, Social Studies and Government, History, Government, Law, Electricity, Electronics, Criminal Justice, Computer Skills, Research and Writing Skills, Communication Skills, Teamwork Skills, Leadership Skills, Secretary's Commission on Achieving Necessary Skills, (SCANS), SkillsUSA-VICA, CompTia, World Wide Web Consortium (W3C), Writers Guild (HWG), A+ Certification

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 3.0

Students will analyze the growth and development of the information technology industry to gain insight regarding past, current, and future trends of computer architecture, network architecture, and Web design.

LEARNING EXPECTATIONS

The student will:

3.1 Trace the evolution of computers, networking, the Internet, and the Web.
3.2 Identify people in history who helped to shape the information technology industry.
3.3 Analyze current cultural and economic indicators to anticipate future trends in the information technology industry.
3.4 Explore economic aspects, the free enterprise system, and the role of government as they relate to the information technology industry.

PERFORMANCE STANDARDS: EVIDENCE STANDARD IS MET

The student:

3.1.A Develops a research project depicting the history of the information technology industry pertaining to computer architecture, network architecture, and Web design.
3.1.B Categorizes changes in the information technology industry and describes the effects of the changes.
3.1.C Researches the evolution of Hypertext Markup Languages (HTML) and other Markup languages.
3.1.D Explains the role of the World Wide Web Consortium (WC3) and their interaction with Web browser manufacturers.
3.1.E Comprehends the need for a governing body for Web standards and emerging standards.
3.2. Profiles individual achievements within different divisions of the industry and determines personal and global economic impact.
3.3 Predicts key changes within the industry, which are based on societal, cultural, and economic trends.
3.4.A Collects and presents information related to government agencies and legislation concerning the information technology industry.
3.4.B Describes the effects of market factors on the information technology industry.

SAMPLE PERFORMANCE TASKS

- Research industry history, trends, and pioneers in computer, Internet, and Web development from the Internet, media research, interviews, and other research sources.
- Plot a “Computers Today and Tomorrow” graph from given data.
- Distinguish between HTML, DHTML, XML.
- Describe the intent of the WC3 and its development of markup languages.
- Explains the WC3 member partners and its three-host makeup.
- Debate the economic impact of the free enterprise system on the information technology industry.

- Conduct interviews and gather data from individuals concerning the growth and development of the information technology industry.
- Brainstorm and reach consensus on the effects of government agencies and legislation on the computer industry.

INTEGRATION LINKAGES

Computer Skills, Internet Navigation Skills, Protocols, Language Arts, Foreign Language, Science, Math, Math for Technology, Social Studies and Government, History, Government, Law, Electricity, Electronics, Criminal Justice, Computer Skills, Research and Writing Skills, Communication Skills, Teamwork Skills, Leadership Skills, Secretary's Commission on Achieving Necessary Skills, (SCANS), SkillsUSA-VICA, CompTia, World Wide Web Consortium (W3C), Writers Guild (HWG), A+ Certification

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 4.0

Students will interpret and demonstrate the principles of industrial safety standards associated with the information technology industry.

LEARNING EXPECTATIONS

The student will:

4.1 Implement the industrial safety standards established by the Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA).

4.2 Identify and categorize safety hazards and prevention in the information technology industry.

4.3 Exhibit acceptable dress and personal grooming determined by the information technology industry.

PERFORMANCE STANDARDS: EVIDENCE STANDARD IS MET

The student:

4.1.A Establishes and maintains a safe working environment.

4.1.B Passes with 100% accuracy, a written safety examination.

4.2.A Distinguishes and employs measures to prevent and eliminate contaminants and ensure ecological, chemical, and physical safety.

4.2.B Maintains tools and equipment in a safe and clean condition.

4.3 Compares and contrasts appropriate and inappropriate dress and personal grooming characteristics for specific jobs within the information technology industry.

SAMPLE PERFORMANCE TASK

- Conduct a self-inspection of the laboratory and identify modifications necessary for compliance with rules, regulations, and standards of governing agencies.
- Appraise the work area for safety hazards and list common causes of typical accidents and injuries in the information technology industry.
- Outline a safety management program.
- Calculate the cost of safety corrections, including financial and environmental impact.
- Develop emergency policies for the information technology laboratory.
- Role-play scenarios involving appropriate and inappropriate dress and personal grooming for the information technology industry.
- Participate in the Occupational Safety and Health competitions in Tennessee SkillsUSA-VICA.

INTEGRATION LINKAGES

SkillsUSA-VICA, Occupational Safety and Health Administration (OSHA), Tennessee Occupational Safety and Health Administration (TOSHA), Environmental Protection Agency (EPA), Secretary's Commission on Achieving Necessary Skills (SCANS), CompTIA, *Professional Development Program*, SkillsUSA-VICA, Science, Electronics, Math, Language

Arts, Teambuilding Skills, Communication Skills, Critical-Thinking Skills, Computer Skills, Internet Navigation

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 5.0

Students will analyze electronic fundamentals and evaluate basic components associated with a computer architecture, network architecture, and Web design.

LEARNING EXPECTATIONS

The student will:
5.1 Demonstrate applications of Ohm's Law.
5.2 Evaluate components of the power supply.
5.2 Evaluate basic components associated with the system board for a computer.
5.4 Evaluate and demonstrate capabilities of various storage devices.

PERFORMANCE STANDARDS: EVIDENCE STANDARD IS MET

The student:
5.1 Compares resistance to current flow.
5.2.A Selects implements, tools, and equipment for use in disassembling the power supply of a computer.
5.2.B Explains the purpose of each component of the power supply.
5.3.A Analyzes components of the system board of a computer.
5.3.B Explains the purpose of each component of the system board of a computer.
5.4 Compares quality and capabilities of various storage devices.

SAMPLE PERFORMANCE TASK

- Disassemble the power supply of a computer and identify components.
- Test electrical circuit and system boards.
- List components of the system boards.
- Develop a presentation on various storage devices.

INTEGRATION LINKAGES

SkillsUSA-VICA, Occupational Safety and Health Administration (OSHA), Tennessee Occupational Safety and Health Administration (TOSHA), Environmental Protection Agency (EPA), Secretary's Commission on Achieving Necessary Skills (SCANS), CompTIA, *Professional Development Program*, SkillsUSA-VICA, Science, Electronics, Math, Language Arts, Teambuilding Skills, Communication Skills, Critical-Thinking Skills, Computer Skills, Internet Navigation

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 6.0

Students will evaluate the general responsibilities of an operating system.

LEARNING EXPECTATIONS

The student will:
6.1 Compare basic types of operating systems.
6.2 Configure the system through the CMOS setup procedure.
6.3 Analyze the function and purpose of disk operating system (DOS).
6.4 Install and configure disk operating systems to the basic operational level.
6.5 Diagnose and correct disk operating system (DOS) problems.
6.6 Edit the AUTOEXEC.BAT and CONFIG.SYS files for troubleshooting purposes.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:
6.1 Recognizes and describes basic types of operating systems.
6.2 Demonstrates proper CMOS setup procedures and tests.
6.3 Charts the function and purpose of disk operating system (DOS).
6.4 Demonstrates the installation and configuration of disk operating system (DOS) and tests.
6.5 Demonstrates proper steps for diagnosing disk operating system (DOS) problems.
6.6 Configures AUTOEXEC.BAT and CONFIG.SYS file and test.

SAMPLE PERFORMANCE TASK

- Identify basic operating systems and describe use.
- Replace components and reconfigure CMOS and test.
- Troubleshoot operating systems (DOS) problems.
- Create and demonstrate proper use of AUTOEXEC.BAT and CONFIG.SYS files.

INTEGRATION LINKAGES

SkillsUSA-VICA, Occupational Safety and Health Administration (OSHA), Tennessee Occupational Safety and Health Administration (TOSHA), Environmental Protection Agency (EPA), Secretary's Commission on Achieving Necessary Skills (SCANS), CompTIA, *Professional Development Program*, SkillsUSA-VICA, Science, Electronics, Math, Language Arts, Teambuilding Skills, Communication Skills, Critical-Thinking Skills, Computer Skills, Internet Navigation

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 7.0

Students will evaluate peripheral devices that can be attached to the central processing unit.

LEARNING EXPECTATIONS

The student will:
7.1 Manipulate keyboard, mouse, CD burners, scanners, and other peripheral devices.
7.2 Evaluate connections or exchange display devices.
7.3 Connect a variety of devices to the central processing unit.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:
7.1 Performs activities using the keyboard, mouse, CD burners, scanners, and other peripheral devices.
7.2.A Makes necessary adjustments to connections or exchange display devices.
7.2.B Troubleshoots connections or exchange display devices.
7.3 Troubleshoots peripheral device connections.

SAMPLE PERFORMANCE TASK

- Install software for peripheral devices.
- Set up mouse pointers, tracking speeds, and click functions.
- Demonstrate key functions such as alternate (Alt) and control (Ctrl).
- Set up graphic card properties.
- Set up peripheral device properties.

INTEGRATION LINKAGES

SkillsUSA-VICA, Occupational Safety and Health Administration (OSHA), Tennessee Occupational Safety and Health Administration (TOSHA), Environmental Protection Agency (EPA), Secretary's Commission on Achieving Necessary Skills (SCANS), CompTIA, *Professional Development Program*, SkillsUSA-VICA, Science, Electronics, Math, Language Arts, Teambuilding Skills, Communication Skills, Critical-Thinking Skills, Computer Skills, Internet Navigation

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 8.0

Students will analyze Windows programs.

LEARNING EXPECTATIONS

The student will:
8.1 Evaluate the history and development of Windows software programs.
8.2 Use various Windows setup modes to install Windows into a system.
8.3 Start Windows in various operating modes.
8.4 Utilize the control panel functions to establish or modify system settings.
8.5 Develop a file structure for effective management of data files and maintenance of existing data.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:
8.1 Researches the most current Windows operating systems and projected future developments.
8.2 Demonstrates the use of Windows installation and setup.
8.3 Demonstrates various start-up modes for Windows.
8.4 Demonstrates the control panel functions for modification of system settings.
8.5 Designs a sample file system for a particular project.

SAMPLE PERFORMANCE TASK

- Compare the differences between Windows versions.
- Install a version of Windows and test.
- Demonstrate problem solving using safe mode.
- Demonstrate the use of control panel functions for proper setup.
- Present a sample file system to the class.

INTEGRATION LINKAGES

SkillsUSA-VICA, Occupational Safety and Health Administration (OSHA), Tennessee Occupational Safety and Health Administration (TOSHA), Environmental Protection Agency (EPA), Secretary's Commission on Achieving Necessary Skills (SCANS), CompTIA, *Professional Development Program*, SkillsUSA-VICA, Science, Electronics, Math, Language Arts, Teambuilding Skills, Communication Skills, Critical-Thinking Skills, Computer Skills, Internet Navigation

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 9.0

Students will install drivers for Windows specific applications.

LEARNING EXPECTATIONS

The student will:
9.1 Locate and install proper driver.
9.2 Make appropriate modifications within Windows to achieve maximum utilization for installed devices.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:
9.1.A Researches the Internet for the most updated drivers.
9.1.B Installs drivers for video, sound cards, and network connectivity.
9.1.C Installs drivers for peripheral devices.
9.2 Modifies drivers to achieve maximum performance.

SAMPLE PERFORMANCE TASK

- Present research and findings for assigned driver.
- Demonstrate installation for video, sound cards, and network connectivity drivers.
- Demonstrate installation for peripheral drivers.
- Evaluate factory drivers and modify for maximum performance.

INTEGRATION LINKAGES

SkillsUSA-VICA, Occupational Safety and Health Administration (OSHA), Tennessee Occupational Safety and Health Administration (TOSHA), Environmental Protection Agency (EPA), Secretary's Commission on Achieving Necessary Skills (SCANS), CompTIA, *Professional Development Program*, SkillsUSA-VICA, Science, Electronics, Math, Language Arts, Teambuilding Skills, Communication Skills, Critical-Thinking Skills, Computer Skills, Internet Navigation

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 10.0

Students will evaluate capabilities of printers.

LEARNING EXPECTATIONS

The student will:
10.1 Perform installation and configuration of printers for Windows operation.
10.2 Evaluate various types of cable connection between the printer and the computer.
10.3 Analyze special considerations that must be observed when installing or repairing printers.
10.4 Evaluate major components of a printer.
10.5 Evaluate block diagrams for troubleshooting printers.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:
10.1 Installs and configures a printer for Windows operation.
10.2 Describes a particular type of cable connection between the printer and the computer and presents it to the class.
10.3.A Develops a procedural chart for installing printers.
10.3.B Develops a procedural chart for troubleshooting printers.
10.4 Explains the purpose of individual components of the printer.
10.5 Performs troubleshooting techniques.

SAMPLE PERFORMANCE TASK

- Demonstrate printer installation and configuration.
- Present various cabling techniques for printer connectivity.
- Draw a block diagram of a typical laser printer.

INTEGRATION LINKAGES

SkillsUSA-VICA, Occupational Safety and Health Administration (OSHA), Tennessee Occupational Safety and Health Administration (TOSHA), Environmental Protection Agency (EPA), Secretary's Commission on Achieving Necessary Skills (SCANS), CompTIA, *Professional Development Program*, SkillsUSA-VICA, Science, Electronics, Math, Language Arts, Teambuilding Skills, Communication Skills, Critical-Thinking Skills, Computer Skills, Internet Navigation

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 11.0

Students will demonstrate advanced knowledge of the Internet.

LEARNING EXPECTATIONS

The student will:
11.1 Illustrate the relationship of Web design terms to Web designs and software applications.
11.2 Demonstrate the use of search engines and search terms.
11.3 Navigate between Uniform Resource Locator (URL) links.
11.4 Comprehend and apply standard path/file name structure.

PERFORMANCE STANDARDS: EVIDENCE STANDARD IS MET

The student:
11.1.A Evaluates methods used or actions taken and assigns the appropriate terms.
11.2.A Queries and uses Internet search engines to obtain specified results.
11.2.B Uses appropriate software to configure browser for specifications.
11.2.C Configures basic and advanced browser settings to connect to the Internet.
11.3.A Compares the relationships between different types of URL's.
11.3.B Recognizes and discusses the differences between File Transfer Protocol and Hypertext Transfer Protocol.
11.4.A Differentiates between relative and absolute URL's.
11.4.B Determines the path/file name syntax to locate files on a computer.
11.4.C Distinguishes between DOS and UNIX based path-names.

SAMPLE PERFROMANCE TASKS

- Defines terms used unique to the World Wide Web and page design.
- Incorporate vocabulary words during classroom discussion and development of web pages.
- Given a pre-constructed Web Page, students will define tags and techniques used.
- Set up and use common web browser software to navigate the Internet.
- Obtain and anticipate results from search engine queries.
- Using Internet Explorer or Netscape browser software, configure browser to the specifications provided.

INTEGRATION LINKAGES

SkillsUSA-VICA, Occupational Safety and Health Administration (OSHA), Tennessee Occupational Safety and Health Administration (TOSHA), Environmental Protection Agency (EPA), Secretary's Commission on Achieving Necessary Skills (SCANS), CompTIA, *Professional Development Program*, SkillsUSA-VICA, Science, Electronics, Math, Language Arts, Teambuilding Skills, Communication Skills, Critical-Thinking Skills, Computer Skills, Internet Navigation

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 12.0

Students will develop proficiency with the features and utilities available with commercial off-the-shelf (COTS) Web building software.

LEARNING EXPECTATIONS

The student will:
12.1 Evaluate the features of commercial off-the-shelf (COTS) Web publishing packages.
12.2 Uses COTS Web publishing software to construct page features.

PERFORMANCE STANDARDS: EVIDENCE STANDARD IS MET

The student:
12.1.A Develops Web pages using two COTS products and compares the results.
12.1.B Differentiates between COTS product limitations and abilities.
12.2 Comprehends the need for the development of markup languages building skills with COTS.

SAMPLE PERFORMANCE TASKS

- Construct several Web pages with each COTS product. Using a rubic, list the abilities and limitations of each assessed product. Using markup language scripting abilities from previous lessons, modify the constructed pages in those areas that the COTS would not perform.

INTEGRATION LINKAGES

SkillsUSA-VICA, Occupational Safety and Health Administration (OSHA), Tennessee Occupational Safety and Health Administration (TOSHA), Environmental Protection Agency (EPA), Secretary's Commission on Achieving Necessary Skills (SCANS), CompTIA, *Professional Development Program*, SkillsUSA-VICA, Science, Electronics, Math, Language Arts, Teambuilding Skills, Communication Skills, Critical-Thinking Skills, Computer Skills, Internet Navigation Skills,. World Wide Web Consortium (WC3), HTML Writers Guild (HWG)

INFORMATION TECHNOLOGY INFRASTRUCTURE

STANDARD 13.0

Students will organize and connect multiple Web documents using frame pages.

LEARNING EXPECTATIONS

The student will:
13.1 Differentiate between types of frame pages.
13.2 Discuss the use of markup tags, such as HTML, to create columns and rows within a document.
13.3 Comprehend the use of tags to prevent scrolling, browser resizing, and control frame content and size.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:
13.1 Selects frames page types from examples given.
13.2 Creates columns and rows according to specifications.
13.3 Configures frame content, size and attributes according to specifications.

SAMPLE PERFORMANCE TASKS

- Given the specifications for frames page construction, students will construct the frames page within tolerance allowed by the instructor.
- Given existing frames pages, students will adjust attributes to make pages reflect the desired specifications relating to size, scroll, border, and content.

INTEGRATION LINKAGES

SkillsUSA-VICA, Occupational Safety and Health Administration (OSHA), Tennessee Occupational Safety and Health Administration (TOSHA), Environmental Protection Agency (EPA), Secretary's Commission on Achieving Necessary Skills (SCANS), CompTIA, *Professional Development Program*, SkillsUSA-VICA, Science, Electronics, Math, Language Arts, Teambuilding Skills, Communication Skills, Critical-Thinking Skills, Computer Skills, Internet Navigation Skills World Wide Web Consortium (WC3), HTML Writers Guild (HWG)

INFORMATION TECHNOLOGY INFRASTRUCTURE

Suggested Resources

World Wide Web Constorium (WC3): http://www.w3c.org
HTML for the World Wide Web 4 - Elizabeth Castro
HTML Writers Guild: http://www/hwg.org
Netscape Navigator Explorer (current version)
Search Engines
Macromedia Dreamweaver
Microsoft Front Page
CompTia www.comptia.org
Meyers, Michael. *All In One A+ Certification Exam Guide,* McGraw-Hill/Osborne
Meyers, Michael. *All In One Network+ Certification Exam Guide,* McGraw-Hill/Osborne